

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-34. (Cancelled)

35. (Previously Presented) The method according to claim 43, further comprising:

receiving said parameter via a broadcast channel.

36. (Previously Presented) A method, comprising:

receiving a dynamically adjustable parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter;

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station; and

receiving said parameter via a broadcast channel, wherein said broadcast channel is a broadcast channel of a wideband code division multiple access system.

37. (Previously Presented) A method, comprising:

receiving a dynamically adjustable parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter;

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station;

receiving said parameter via a broadcast channel; and

initiating said random access operation via a physical random access channel uplink channel and an acquisition indication channel downlink channel of the wideband code division multiple access system.

38. (Previously Presented) The method according to claim 36, wherein said parameter defines a subset of available access slots of said mobile communications network.

39. (Previously Presented) The method according to claim 38, further comprising:

determining said subset by another parameter transmitted from said base transceiver station to said mobile station.

40. (Previously Presented) The method according to claim 39, wherein said other parameter is a timing parameter defining a transmission timing of an uplink access slot.

41. (Cancelled)

42. (Previously Presented) The method according to claim 39, further comprising:

changing a bit number of said parameter in dependence on said other parameter.

43. (Previously Presented) A method, comprising:

receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter;

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network;

determining said subset by another parameter transmitted from said base transceiver station to said mobile station;

changing a bit number of said parameter in dependence on said other parameter; and

disabling a transmission of a preamble signature or an acquisition indication in dependence on a value of said parameter.

44. (Previously Presented) A method, comprising:

receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter;

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network;

determining said subset by another parameter transmitted from said base transceiver station to said mobile station;

changing a bit number of said parameter in dependence on said other parameter; and

calculating an index of an allowed uplink access slot on the basis of a value of said parameter and a frame number of a frame used for transmitting an uplink access slot.

45. (Previously Presented) A method, comprising:

receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at

least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter; and

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to perform a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network, wherein said subset is determined by another parameter transmitted from said base transceiver station to said at least one mobile station,

wherein a bit number of said parameter is changed in dependence on said other parameter,

wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot,

wherein said index is calculated by using the equation

$$i = 3 \cdot N + (F \text{ modulo } 3)$$

where $0 \leq N \leq 2$,

wherein F and N are integers, and F denotes said frame number, and

wherein only access slots having indices within the range 0 to 7 are valid.

46. (Previously Presented) A method, comprising:

receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter; and

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to perform a random access operation with said base transceiver station wherein said parameter defines a subset of available access slots of said mobile communications network, wherein said subset is determined by another parameter transmitted from said base transceiver station to said mobile station, wherein a bit number of said parameter is changed in dependence on said other parameter, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot,

wherein said index is calculated by using the equation

$$i = 4 \cdot N + (\Gamma \text{ modulo } 4)$$

where $0 \leq N \leq 3$,

wherein Γ and N are integers, and Γ denotes a frame number indicating two consecutive frame numbers of said frame used to transmit an uplink access slot, and

wherein only access slots having indices within the range 0 to 14 are valid.

47. (Previously Presented) The method according to claim 45, wherein said parameter determines an offset to be added to said calculated index.

48. (Previously Presented) The method according to 36, further comprising:
determining an index of an allowed uplink access slot on the basis of a value of

said parameter irrespective of a frame number of a frame used to transmit an uplink access slot.

49-50. (Cancelled)

51. (Previously Presented) A method, comprising:

receiving a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network by at least one mobile station of a plurality of mobile stations of the mobile communications network;

determining, at said at least one mobile station, said allowed access slots of the physically existing random access channel based on said parameter; and

using, at said at least one mobile station, at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein bit values of a binary expression of said parameter determine a combination of calculated indices obtained for other values of said parameter, said other values corresponding to binary weights of said binary expression.

52. (Cancelled)

53. (Previously Presented) A system, comprising:

a base transceiver station configured to transmit a dynamically adjustable parameter defining allowed access slots of a physically existing random access channel; and

a plurality of mobile stations configured to receive said parameter to determine said allowed access slots of the physically existing random access channel based on said parameter, and to use at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein said base transceiver station is a wideband code division multiple access base transceiver station and said plurality of mobile stations are wideband code division multiple access mobile stations.

54. (Cancelled)

55. (Previously Presented) An apparatus, comprising:

setting means for setting a dynamically adjustable parameter defining allowed access slots of a physically existing random access channel, wherein at least one mobile station initiates a random access operation to the apparatus based on the allowed access slots of the physically existing random access channel; and

transmitting means for transmitting said parameter to said plurality of mobile stations, wherein said apparatus is a wideband code division multiple access base transceiver station.

56. (Previously Presented) The apparatus according to claim 55, wherein said transmitting means transmits said parameter via a broadcast channel.

57. (Previously Presented) The apparatus according to claim 55, wherein said setting means sets said parameter in dependence on a timing parameter value defining a transmission

timing of an uplink access slot in said random access operation.

58. (Cancelled)

59. (Previously Presented) The apparatus according to claim 64, wherein said receiver is configured to receive said parameter via a broadcast channel.

60. (Previously Presented) The apparatus according to claim 64, wherein said processor is further configured to determine said allowed access slots of the physically existing random access channel on the basis of said received parameter and a timing parameter received via said broadcast channel.

61. (Previously Presented) The apparatus according to claim 64, wherein said processor is further configured to calculate an index of an allowed uplink access slot on the basis of the value of said received parameter and a frame number of a frame used to transmit an uplink access slot.

62. (Previously Presented) The apparatus according to claim 64, wherein said processor is further configured to determine an index of an allowed uplink access slot on the basis of the value of said parameter irrespective of a frame number of a frame used to transmit an uplink access slot.

63. (Cancelled)

64. (Previously Presented) An apparatus, comprising:

a receiver configured to receive from a network element a dynamically adjustable parameter defining allowed access slots of a physically existing random access channel for a random access operation;

a processor configured to determine said allowed access slots of the physically existing random access channel based on said parameter received from said network element; and

a transmitter configured to initiate transmission of a random access message to said network element using at least one of said determined allowed access slots of the physically existing random access channel, wherein the processor is further configured to randomly select an uplink access slot to be used for transmitting a preamble of said random access message from the allowed access slots of the physically existing random access channel determined by said processor, and wherein consecutive preambles are transmitted a predetermined number of access slots apart.

65. (Previously Presented) The apparatus according to claim 64, wherein said predetermined number depends on a timing parameter received by said receiver.

66. (Previously Presented) The apparatus according to claim 64, wherein said processor is further configured to perform said random selection any time a preamble needs to be transmitted.

67-73. (Cancelled)

74. (Previously Presented) An apparatus, comprising:

a processor configured to receive a dynamically adjustable parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, determine said allowed access slots of the physically existing random access channel based on said parameter, use at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, and receive said parameter via a broadcast channel, wherein said broadcast channel is a broadcast channel of a wideband code division multiple access system.

75. (Previously Presented) An apparatus, comprising:

a processor configured to receive a dynamically adjustable parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, determine said allowed access slots of the physically existing random access channel based on said parameter, use at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, receive said parameter via a broadcast channel, and initiate said random access operation via a physical random access channel uplink channel and an acquisition indication channel downlink channel of the wideband code division multiple access system.

76. (Previously Presented) An apparatus, comprising:

a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, determine said allowed access slots of the physically existing random access channel based on said parameter, use at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network, determine said subset by another parameter transmitted from said base transceiver station, change a bit number of said parameter in dependence on said other parameter, and disable a transmission of a preamble signature or an acquisition indication in dependence on a value of said parameter.

77. (Previously Presented) An apparatus, comprising:

a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, determine said allowed access slots of the physically existing random access channel based on said parameter, use at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network, determine said subset by another parameter transmitted from said base transceiver station, change a bit number of said parameter in dependence on said other parameter, and calculate an index of an allowed uplink access slot on the basis of a value of said parameter and a frame number of a frame used for transmitting an uplink access slot.

78. (Previously Presented) An apparatus, comprising:

a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network; determine said allowed access slots of the physically existing random access channel based on said parameter, and use at least one of said determined allowed access slots of the physically existing random access channel to perform a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network, wherein said subset is determined by another parameter transmitted from said base transceiver station, wherein a bit number of said parameter is changed in dependence on said other parameter, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot,

wherein said index is calculated by using the equation

$$i = 3 \cdot N + (F \text{ modulo } 3)$$

where $0 \leq N \leq 2$,

wherein F and N are integers, and F denotes said frame number, and

wherein only access slots having indices within the range 0 to 7 are valid.

79. (Previously Presented) An apparatus, comprising:

a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, determine said allowed access slots of the physically existing random

access channel based on said parameter, and use at least one of said determined allowed access slots of the physically existing random access channel to perform a random access operation with said base transceiver station, wherein said parameter defines a subset of available access slots of said mobile communications network, wherein said subset is determined by another parameter transmitted from said base transceiver station, wherein a bit number of said parameter is changed in dependence on said other parameter, wherein an index of an allowed uplink access slot is calculated on the basis of the value of said parameter and a frame number of a frame used for transmitting an uplink access slot, wherein said index is calculated by using the equation

$$i = 4 \cdot N + (\Gamma \text{ modulo } 4)$$

where $0 \leq N \leq 3$,

wherein Γ and N are integers, and Γ denotes a frame number indicating two consecutive frame numbers of said frame used to transmit an uplink access slot, and wherein only access slots having indices within the range 0 to 14 are valid.

80. (Previously Presented) An apparatus, comprising:

a processor configured to receive a parameter defining allowed access slots of a physically existing random access channel from a base transceiver station of a mobile communications network, determine said allowed access slots of the physically existing random access channel based on said parameter, and use at least one of said determined allowed access slots of the physically existing random access channel to initiate a random access operation with said base transceiver station, wherein bit values of a binary expression of said parameter determine a combination of calculated indices obtained for other values of said parameter, said other values corresponding to binary weights of said binary expression.

81. (Previously Presented) The method according to claim 36, wherein said parameter is dynamically adjusted by said mobile communications network based on at least one of random access messaging load and hardware requirements at said base transceiver station.

82. (Previously Presented) The method according to claim 36, further comprising:
receiving, at said at least one mobile station, an adjusted parameter defining a modified set of allowed access slots of the physically existing random access channel from said base transceiver station via said broadcast channel;

determining, at said at least one mobile station, said modified set of allowed access slots of the physically existing random access channel based on said adjusted parameter; and

using, at said at least one mobile station, at least one of said determined modified set of allowed access slots of the physically existing random access channel to initiate a second random access operation with said base transceiver station.

83. (Previously Presented) The method according to claim 37, wherein said parameter is dynamically adjusted by said mobile communications network based on at least one of random access messaging load and hardware requirements at said base transceiver station.

84. (Previously Presented) The method according to claim 37, further comprising:
receiving, at said at least one mobile station, an adjusted parameter defining a modified set of allowed access slots of the physically existing random access channel from said base transceiver station via said broadcast channel;

determining, at said at least one mobile station, said modified set of allowed access slots of the physically existing random access channel based on said adjusted parameter;

using, at said at least one mobile station, at least one of said determined modified set of allowed access slots of the physically existing random access channel to initiate a second random access operation with said base transceiver station; and

initiating said second random access operation via said physical random access channel uplink channel and said acquisition indication channel downlink channel of the wideband code division multiple access system.

85. (Previously Presented) The system according to claim 53, wherein said base transceiver station is further configured to dynamically adjust said parameter based on at least one of random access messaging load and hardware requirements at said base transceiver station.

86. (Previously Presented) The system according to claim 53, wherein:
said base transceiver station is further configured to dynamically adjust said parameter and to transmit said adjusted parameter defining a modified set of allowed access slots of said physically existing random access channel; and

said plurality of mobile stations are further configured to receive said adjusted parameter to determine said modified set of allowed access slots of the physically existing random access channel based on said adjusted parameter, and to use at least one of said determined modified set of allowed access slots of the physically existing random access channel to initiate a second random access operation with said base transceiver station.

87. (Previously Presented) The apparatus according to claim 55, wherein said setting means comprises means for dynamically adjusting said parameter based on at least one of random access messaging load and hardware requirements at said base transceiver station.

88. (Previously Presented) The apparatus according to claim 55, wherein:
said setting means comprises means for dynamically adjusting said parameter to define a modified set of allowed access slots of the physically existing random access channel, wherein at least one mobile station initiates a random access operation to the apparatus based on the modified set of allowed access slots of the physically existing random access channel; and
said transmitting means comprises means for transmitting said adjusted parameter to said plurality of mobile stations.

89. (Previously Presented) The apparatus according to claim 64, wherein said parameter is dynamically adjusted by said network element based on at least one of random access messaging load and hardware requirements at said network element.

90. (Previously Presented) The apparatus according to claim 64, wherein:
said receiver is further configured to receive from said network element an adjusted parameter defining a modified set of allowed access slots of the physically existing random access channel for a second random access operation;
said processor is further configured to determine said modified set of allowed access slots of the physically existing random access channel based on said adjusted parameter received from said network element; and

said transmitter is further configured to initiate transmission of a second random access message to said network element using at least one of said determined modified set of allowed access slots of the physically existing random access channel, and to randomly select an uplink access slot to be used for transmitting a preamble of said second random access message from the modified set of allowed access slots of the physically existing random access channel determined by said processor.

91. (Previously Presented) The apparatus according to claim 74, wherein said parameter is dynamically adjusted by said mobile communications network based on at least one of random access messaging load and hardware requirements at said base transceiver station.

92. (Previously Presented) The apparatus according to claim 74, wherein said processor is further configured to receive an adjusted parameter defining a modified set of allowed access slots of the physically existing random access channel from said base transceiver station of said mobile communications network via said broadcast channel, determine said modified set of allowed access slots of the physically existing random access channel based on said adjusted parameter, and use at least one of said determined modified set of allowed access slots of the physically existing random access channel to initiate a second random access operation with said base transceiver station.

93. (Previously Presented) The apparatus according to claim 75, wherein said parameter is dynamically adjusted by said mobile communications network based on at least one of random access messaging load and hardware requirements at said base transceiver station.

94. (Previously Presented) The apparatus according to claim 75, wherein said processor is further configured to receive an adjusted parameter defining a modified set of allowed access slots of the physically existing random access channel from said base transceiver station of said mobile communications network via said broadcast channel, determine said modified set of allowed access slots of the physically existing random access channel based on said adjusted parameter, use at least one of said determined modified set of allowed access slots of the physically existing random access channel to initiate a second random access operation with said base transceiver station, and initiate said second random access operation via said physical random access channel uplink channel and said acquisition indication channel downlink channel of the wideband code division multiple access system.